

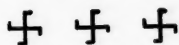
RECORDS ^{OF} THE PAST

VOL. VI



PART VII

JULY, 1907

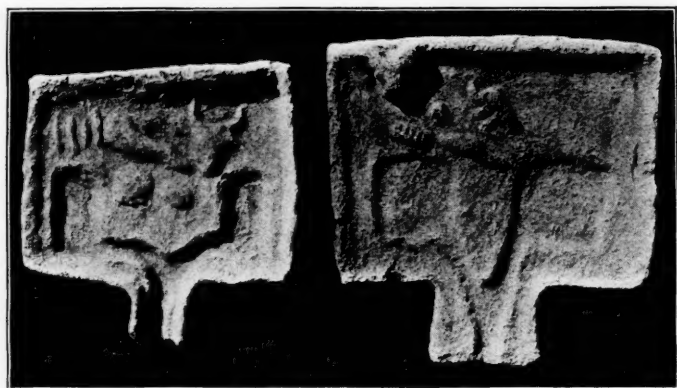


SOUL-HOUSES IN EGYPT*

FOR many years past, pottery models of houses had occasionally found their way to museums, from the illicit digging of natives in Egypt. But nothing was known as to their original positions or dates, and they were so scarce that even the national museum in Cairo had not any example. During the past winter the work of the Egyptian Research Account, in Upper Egypt, has brought to light a large number of these models, and enabled the subject to be put on an exact historical basis of development.

The name of Asyut will be familiar to many, from the large American college there, which is so efficient an elevator to the native Christian population of Upper Egypt. In the desert cliffs of limestone at the side of the Nile Valley are some vast tombs cut in the rock, beside hundreds of smaller burial chambers. And a few miles south of this is a similar set of rock-tombs at the village of Rifeh. These are all of the period of the Middle Kingdom, IX to XII dynasties, about 3700-3300 B.C. In front of the cliffs at Rifeh was a large cemetery of graves cut in a gravel shoal, on the foot plain which is formed by about half a mile of desert between the cliffs and the Nile-mud cultivation. This shoal had gradually been accumulated by wash from

*The full detail of these soul-houses, with photographs of a hundred of them, and also of the other results of this year, is ready for subscribers to the Egyptian Research Account (\$5.00) for the single volume of 40 plates, and the double volume will be issued in two or three months' time.



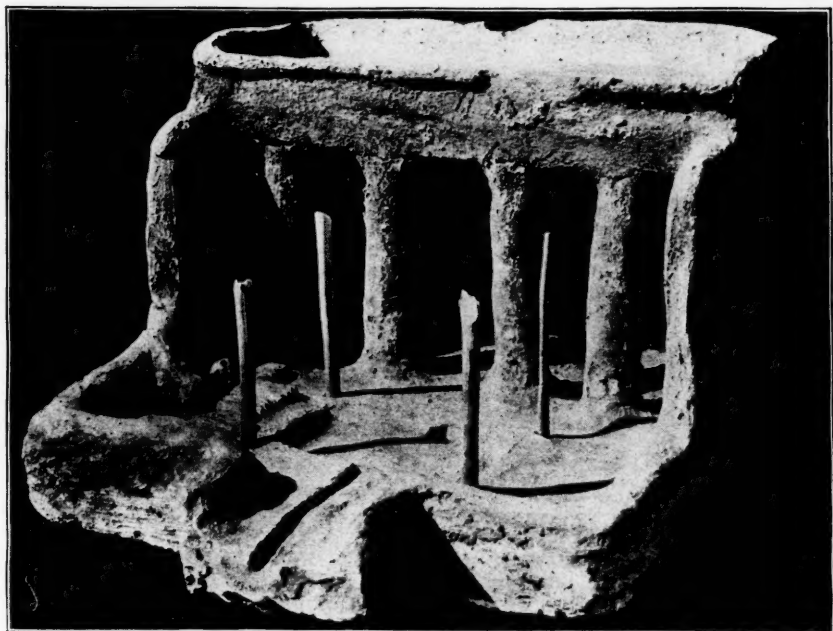
POTTERY TRAYS OF OFFERINGS [FIG. 1]

the desert hills during rare storm-bursts, perhaps once in a generation, or in a century. And the shoal had continued thus to grow, so that about 25 in. of gravel had been laid down in 5,000 years since the graves were cut, or half an inch in a century. The whole cemetery was thus covered with a purely natural unbroken sheet of gravel. On trenching through this, hundreds of graves were found, and though all had been plundered for valuables anciently, some fine objects were recovered, and the pottery models had been left behind unheeded in the search for precious metals.

The conditions here described explain how it comes about that the models were common here while very rare elsewhere. They were



TRAY OF OFFERINGS WITH SHELTER [FIG. 2]



PORTICO WITH CANOPY OVER THE TANK [FIG. 3]

originally placed upon the surface of the grave, to give shelter to the soul when it came out in search of sustenance. In most cases the desert surface is wasting by denudation, hence the models in such positions were always exposed until entirely destroyed. Here the surface was accumulating, and within a thousand years the models, which were in lower situations, might have 6 or 8 in. of gravel and blown-sand heaped around them, enough to save them from further destruction. A few are quite perfect, most are partly broken, but the scattered fragments serve to show many details of interest. The ancient plunderers had done us one good turn, as in some cases models had fallen into the opened grave, and were thus sanded over and preserved intact.

The origin of these models is in the tray of offerings. In very early time a mat was placed by the grave, and a pan of flour laid upon it for the sustenance of the dead. Such an offering was older than the dynasties, as the Heiroglyph *hotep* derived from it was used by Menes. The actual mat and pan have been found in later times, but the general system in the early dynasties was to carve a stone altar representing it, and place that by the grave. Then the poorer classes had the same imitated in pottery, as in the trays of offerings. (1) On these were hewn 2 tanks for water, with a drain from them, a bull's head, haunch, ribs, cakes, and a bird. These were felt to be but a cold



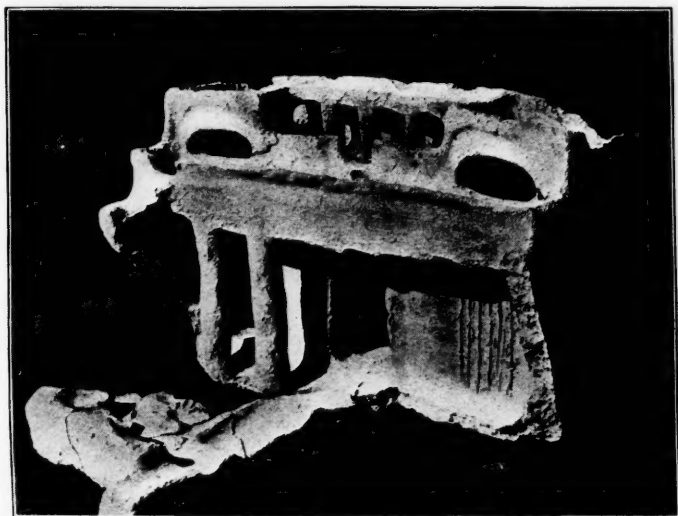
MODERN CEMETERY AT RIFEH SHOWING SERRATED
WALLS USED 5,000 YEARS AGO [FIG. 8]

and inhospitable accommodation for a soul that had come up from the shelter of the earth below, and so the next stage was to provide a shelter, apparently copied from the Bedouin tent. (2) Another stage was to provide a small hut like a sentry box, with sometimes a chair inside it. Then the portico was copied from the houses in actual use. (3) A raised cope was put around the roof of it, and a canopy or shelter from the sun was added above the water tank. In this latter shelter there are the holes for the posts, in which pieces of stick have been inserted for the present view.

The development of the upper story began with the roof coping and a stairway to give access to it. Then small shelters began to be added upon the roof. (4) In the example will be seen a verandah along the back of the roof, two large wind-openings one on each side, with domed tops and clear roof spaces over them—originally 4 columns in front of the house—2 open doors, and a door covered by a mat of maize stalks, which closed the storeroom. Soon the upper story developed as large as the lower, and then furniture began to be introduced. (5) In these the couch is placed on the ground in the front portico, to get the coolest air at night low down, while the chair is on the upper floor, to avoid the dust and heated air from the ground during the day. A later variety was attained by enclosing the whole front court with a high wall entered by a doorway; the offerings were reduced or abolished, and the furniture was put into the back chambers. (6) The couch is here seen with the curved headrest, and the raised foot shelter, which seem to have been always used. A stool is also in the back chamber, one end of which has been broken away. At the left hand in the front court is the stairway which led to the upper story, now lost, and beneath the stairs is the woman making bread,



SOUL-HOUSE WITH COUCH AND STOOL IN BACK CHAMBER
BREAD MAKER BENEATH THE STAIRWAY [FIG. 6]



SOUL-HOUSE WITH UPPER STORY BEGINNING ON THE ROOF
AND CLOSED DOOR TO STOREROOM BELOW [FIG. 4]



FRAGMENTS OF WINDOWS, DOORWAYS AND SERRATED
WALLS OF MODEL HOUSES [FIG. 7]

with a large water jar at her side. The offerings are placed against the wall between two doorways.

The minor details of the brick vaulting of roofs and floors, the floors carried on beams, the trap-door openings for stairs, the cornbins on the roof, are also shown with all the little variations of devices and plans which were actually used. The windows sometimes had a hood-moulding over them (7), and the front doors of the courtyard had a cornice top. The walls were, in the later models, finished off with a serrated top, and the same custom is found in the modern cemetery (8) close by the ancient graves. Examples of these models will be sent to the museums of Philadelphia, Boston, and New York.

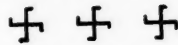
The other results of this season of work were also of much archaeological interest. From the same cemetery were obtained a magnificent burial of the XII dynasty, in richly-painted coffins, with a painted canopic box containing the vases of viscera all inscribed, two beauti-

fully wrought boats, and five carved statuettes. And from smaller tombs, weapons, ivory carvings, scarabs, and hundreds of other objects were procured. At Gizeh, also, to the south of the work of Doctor Reisner, a series of graves of the I dynasty were opened; they all surrounded a great burial, and can thus be dated to the reign of King Zet. From the stone vases, flint knives, ivory carvings, pottery, etc., it is seen that there was no difference of fashion between the southern and northern capitals at Abydos and Gizeh, but that the civilization was already completely unified in details of style, and one place did not lag behind the other as much as a single reign.

The Egyptian Research Account is now about to undertake the largest excavation yet attempted, in clearing the sites of the great temples at Memphis, which cover more than a hundred acres. There probably remain here the foundations of many temples, one below the other, as were found at Abydos, and statuary is likely to be as abundant as it has proved to be at Karnak. The great capital of the land through all its history still awaits research, and though more than a million dollars would be needed to clear the whole remains of the city, yet it is hoped to raise sufficient subscriptions to carry out the most important part of the clearance of the temples.

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WORK AT POMPEII.—During the last year a house, evidently that of a wealthy man, has been partly uncovered in the Via Nolana, one of the principal streets of Pompeii. The atrium, with its Corinthian columns, the tablinum, and part of the peristyle, showing a number of columns, have been excavated. In the impluvium of the atrium the statue of a satyr stands as a fountain figure. In attitude it, in some measure, calls to mind a celebrated Poseidon of the collection of the Laterans. Like most Pompeian decorative figures, this statue is not very carefully executed; nevertheless, in form, attitude, and expression, it shows great naturalness. The laughing face and eyes are wonderfully lifelike. To the wealth and artistic taste of the owner, two other decorative figures bear witness. A face tile of terra cotta shows the front of a crouching lion over the gutter of a waterspout, which was built downward like a shell, and ornamented with acanthus leaves. There is also an original bronze piece of good workmanship, a shield-shaped frame with the head and forefeet of a short-horned bull projecting; a relief, shaped like the beak of a ship, over the neck of the animal leads to the conclusion that this may have served as a plaque, or even as the figurehead of some vessel.

RELICS OF THE STONE AGE FROM TALTAL, CHILE*

TALTAL, Chile, is situated in a desert region, scarcely habitable at present, yet in the terraces due to upheaval, in some cases as much as 250 ft. above sea level, are shell heaps, graves, and other relics of the inhabitants of pre-Spanish times.

A surprisingly large number of the graves have been disturbed, leaving bleached and crumbling bones exposed for miles, so that an untouched grave is rarely met with at present. Probably these treasure-seekers found no metal objects and did not care for relics of no intrinsic value, such as the archaeologist welcomes.

The shell heaps throughout the region indicate the main article of food, and are composed of such shells as are found on the present beach. Fish, mammal, and bird bones are also plentiful, the *guanaco* being the mammal most commonly represented. The implements used in obtaining food are abundant. The "hammer-stones," for breaking the mollusk shells, are most numerous, and are fashioned out of hard pebbles from the boulder beach, sometimes with indentations on each side to aid in grasping, or a groove for the attachment of a handle. Flat slabs, which served as anvils, are almost as plentiful.

Harpoons of *guanaco* bone, or of schist, probably used for spearing sea urchins and crabs in the manner still pursued by the present Chileans are found. In many places the ground is strewn with arrow and lance-heads, and flakes of the silica from which they were made. The best of this material may have come from a distance by exchange for "hammer-stones" from the beaches. One or two arrowheads of crystalline quartz are reported, as well as one which, under the microscope, shows a composition of solidified shells. Mr. Evans was unable to determine the locality from which the material for this latter was derived.

The arrowheads may be grouped as oval, lanceolate, triangular, triangular with basal notch, stemmed, or stemmed with barbs. The edges are curved or rectilinear, usually crenulate. The finer specimens are examples of remarkably delicate chipping. One dagger, 8 in. long, was found, while others are less than one-half in. in length, so small that some credence can be placed in the tradition that they were poisoned.

In the interior there are rock paintings, executed roughly in ochre. A fish often repeated, perhaps as an ideograph for water, is a common design. On one rock is a painting of men with feathered

*During the past two or three years, Oswald H. Evans has carried on archaeological investigations in northern Chile, at Taltal. The results of his investigations have appeared from time to time in *Man*, from which the following article is abstracted.

head-dresses and lances, a woman clothed in a long garment, a child and some kind of an animal. Tradition says that these "Infidel pictures" mark the location of mineral veins, but as yet Mr. Evans suspends judgment as to the truth of this supposition.

A previously undisturbed grave fairly typical of the Taltal district was thoroughly excavated. It was one of a group of 50, arranged in an irregular oval. The graves are from 10 to 20 ft. apart, each marked by a depressed tumulus, often almost destroyed by atmospheric agencies. The mound studied was circular, 10 ft. in diameter, and about 4 ft. high. A few flakes of chalcidony, broken shells, a hammer-stone, an "anvil," crumbling human bones and sherds of pottery were scattered around. Examination proved that the tumulus was built of excavated material with local surface debris added. Near the middle a few pieces of coarse pottery, nearly an inch thick, were found. Later more were discovered, and pieced together into a crude oval vessel, 9 by 7 by 5 in. The base is rounded so that it could stand upright only when thrust into the sand. It seems probable that it was placed near the top of the mound to hold offerings of food.

Below the level of the surrounding surface the earth was soft and free from large pebbles. Small pebbles, sand, shells, and fish remains were plentiful. The interspinous bones of some large fish appeared in such numbers as to indicate that they had been gathered for some purpose. Two and a half feet below the surface some ill-preserved human vertebræ were met with. The small space occupied by the human bones showed that the body was buried in a contracted or crouching position. The skull was crushed, but enough of the lower jaw was preserved to show 3 healthy teeth, remarkable for their perfectly flat upper surfaces.

Mr. Evans was able to separate out the remains of 15 bone harpoons, all in fragments, in this grave. The marks of the tools with which they had been scraped to a point were clearly discernable. None were barbed. It is hard to see how some, fashioned from rib bones, could have been used as weapons. Only one arrowhead was present; it was lanceolate in shape and of poor material. By far the most interesting object was a necklace of shell beads. The scattered beads, when threaded, formed a string 6 ft. long. A few fragments, of irregular shape, stained bright turquoise blue by means of copper, came to light. As this color was confined to these few fragments and no copper-bearing stone was found in the rubbish, which could stain by contact, the coloring seems to have been done artificially.

The pottery fragments found in the Taltal region show no evidence of the use of a wheel in their manufacture. Four classes of pottery are noted by Mr. Evans. The first he describes as being "scooped out of a mass of clay * * * with rounded base and totally devoid of ornament." Two specimens were found and part of a third.

The second class is of better quality, but as far as known also without ornament. The texture is coarse, but the well-curved fragments indicate that the pots were well shaped and sometimes large. Usually the sherds are a quarter of an inch thick, rather poorly baked and show the marks of the tools on both surfaces. "Sometimes the interior is coated with a smooth slip of unbaked clay, probably in order to make the pots capable of holding water, and many of them have holes bored in their upper portions by which they might be suspended." This ware is dull brown. The handles, when present, readily break off. The material, and hence the manufacture, appeared to be local.

The third class is a still finer variety, thoroughly fired, with smooth, glossy surface, and painted ornamentation. Many are shallow bowls and dishes; the more globular have flared rims, small handles close to the rim, and slightly concave bottoms. The most common ornament is a free-hand spiral drawn in black pigment. The inside, as well as the outside, was usually ornamented. Two examples of attempts at depicting animals were found.

By far the best pottery has been found only in isolated fragments. It is thin and has a well-polished surface, deep red or pale buff in color. The ornamentation is in 3 colors. One has on it a painting of a human hand, probably part of an entire figure.

Mr. Evans is inclined to believe that the finer potteries were not imported because there is no example of moulded ornament, none of the black ware characteristic of the Peruvian coast peoples, no fragments referable to the common shapes of the Peruvian ware, and the ornamentation presents features differing from those of the civilizations of the North.



A NEGLECTED ARCHAEOLOGICAL FIELD

DURING the past few years interest in American archaeology has been increasing, especially in regions where the prehistoric ruins are striking and impressive. The less imposing ruins and mounds, however, often furnish more valuable data to the archaeological student. Many of our local state archaeological societies are awakening to the importance of studying the prehistoric history of their states, and such societies should receive all the encouragement possible from persons interested in prehistoric North America.

There is a vast region in our Northwest extending from the area of the Pueblo and Cliff-dwellings northward through the plateaus of Washington, Southern British Columbia, to the region around Hudson

Bay, which has received very little attention from archaeologists. For this region Mr. Harlan I. Smith makes an appeal in the Boas Anniversary Volume, 1906, in an article under the title of *A Vast Neglected Field for Archaeological Research*. Although considerable anthropological work has been done in this area the archaeology has scarcely been touched. In this region there is a paucity of archaeological material which Mr. Smith attributes, in part, to the comparatively recent occupation of the area by Indians, or to the sparse population, if not to both of these causes. He states that, "It is quite possible that the Plains were not thickly populated before the introduction of the horse, the acquisition of which, no doubt, gave a great impetus to migration throughout the entire Plains area."

Although characteristic pottery of the Pueblo area and of the Mississippi Valley is found in these respective regions, yet "no ancient pottery is known from the California area or the Northwest coast. Both of these latter regions are so well known that the absence of pottery, or at least its great scarcity, is determined; but its presence in the wide northern area of the interior of British America is possible. It is true that pottery has been found in Alaska which closely resembles that from the adjacent portion of Siberia. The art of making it may have come from Siberia; so that it does not necessarily lead us to expect to find pottery in the upper Yukon, the Mackenzie Basin, or, in general, in the Canadian Northwest." He continues:

It is true that in this region we may hardly expect to find archaeological material comparable to that found in the Southwest, Mexico, and Peru, especially the kind that would appeal to architects, artists, travelers, and students of modern history. But, however entertaining it might be to contribute to these interests, it must be borne in mind that archaeological work is not done solely to meet the needs of those interested in these subjects; it is the professional duty of the archaeologist to reconstruct prehistoric ethnology even in fields that are held to be barren or largely so, and negative results are helpful in arriving at a knowledge of the prehistoric ethnology of the whole of our continent.

Judging from what we know, however, we may expect to solve a number of problems by working over this area. It would seem advisable to conduct this archaeological work in co-operation with students who are investigating living tribes; for a study of the modern Indian of a certain spot throws light on the archaeology of the region, and an understanding of the antiquities of a given place is helpful in the study of its natives. Furthermore, by this system, the continuity of historical problems is met by a continuity of method.

In selecting successive fields of operation, it would seem best to continue explorations in an adjacent area, sufficiently distant from those already examined to present new conditions and give promise that new facts may be discovered, possibly a new culture-area. At the same time a new field of operations should be so near that no unknown culture-area may intervene. Thus the limits of culture-areas may be determined and new areas be discovered.

To further this work to the best advantage Mr. Smith proposes that those who are familiar with the Pueblo and Cliff-dwelling region should examine the adjacent regions, especially in Kansas, where Pueblos are known to exist, and thus determine the limits of Pueblo culture. He would call on the anthropologists of California, who are

familiar with the prehistoric ethnology of Nevada, to study the region between California and the great Canyon of the Colorado, and those who have worked in the lower Columbia Valley, Washington, and southern British Columbia, to investigate the western limits of the culture found in the Mississippi Valley. He would call on the Historical Society of North Dakota to extend their studies of the Mandan migrations, a work on which they have already made a start. The Historical Society of Nebraska is already planning for more active work in that state, and Mr. Smith would suggest that, if possible, they extend their investigations outside of the state, to the west and northwest. In conclusion, he says:

From another standpoint, the ethnologists interested in the historic Indians might take up prehistoric ethnological work—students of the Siouan groups in the Siouan area, those of the Shoshonean group in the Shoshonean area, and students of the Athapascan group in the Athapascan area. By following this line of investigation, the work of just these men would clarify the problems of the whole situation.



ARCHAEOLOGICAL WORK OF THE UNIVERSITY OF CALIFORNIA

IN THE search for the earliest evidences of man on the Pacific Coast, the University of California has commenced an exploration of the newly discovered Hawver cave in Eldorado County, Cal. The locality is of particular interest as being in the famous auriferous gravel and Calaveras skull region. The cave appears to be more recent than the majority of the caves explored by the University in Shasta County, and is still in the process of growth. Bone remains are numerous, but split bones, so characteristic of the Shasta caves, are scarce. The peculiar extinct goats of the Shasta caves, *Euceratherium* and *Preptoceras*, have not yet been found to be represented by remains, but some excellent specimens of *Megalonyx* and *Equus occidentalis* were obtained. Exploration will be resumed with the subsidence of the water accumulated in the cave during the winter rains.

A careful examination of several shell mounds on San Francisco Bay has recently revealed that their bases are in all cases a number of feet below the present level of the sea, indicating a subsidence of the land to this extent since the sites were first occupied. A considerable antiquity is thus established for the earlier deposits in these mounds, from which collections for the University museum have been obtained.

The University has also recently completed a linguistic survey of the Indians of the Miwok stock, which is one of the principal remaining groups of tribes in California among whom such investigations have heretofore not been systematically made. It was found that the great

number of dialects usually attributed to this people are properly reducible to only four. The territory inhabited by the Miwok was also found to be smaller than has been believed. A number of areas formerly supposed to have been occupied by the Miwok were in reality held by Indians of adjacent stocks. Considerable ethnological collections were formed in this region and in several others where investigations have recently been carried on.

The explorations are under the direction of F. W. Putnam, and have been carried on by A. L. Kroeber, P. E. Goddard, S. A. Barrett, and J. C. Merriam, with the assistance of E. L. Furlong and N. C. Nelson.

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EARLY REFERENCES TO AMBER IN ASIA*

NUMEROUS references to amber appear in Chinese cyclopedias and geographical works, giving much reliable information as to its use and distribution as well as curious ideas of its origin. One such writer, Li Shih-chên, says, "When a tiger dies, its soul (spirit) penetrates into the earth and is a stone. This object resembles amber and is, therefore, called *hu p'o* (tiger's soul)." Still another, T'ao Hung-ching, describes its origin thus:

There is an old saying that the resin of fir-trees sinks into the earth and transforms itself [into amber] after a thousand years. When it is then burned it still has the odor of fir-trees. There is also amber in the midst of which there is a single bee, in shape and color like a living one. The statement of *Po wu chi* that the burning of bees' nests effects its make, is, I fear, not true. Only that kind which, when rubbed with the palm of the hand and thus made warm, attracts mustard-seeds, is genuine.

According to Li Hsün:

Amber is a secretion in the wood of the sea-fir. At first it is like the juice of the peach tree, later it coagulates and assumes form. Besides, there is southern amber (*nan p'o*), which, however, does not come to us on sea going junks.

Others attribute amber not only to the resin of the fir tree, but to that of various trees, one adding, "When bee-nests are burned, the shapes of bees are inside in addition."

Su Sing says:

What all people say about *fu ling* coincides, although there are slight discrepancies. All agree in stating that it arises from the transformation of fir-

*Part 3, vol. 1, of the Memoirs of the American Anthropological Association consists of an interesting paper by Berthold Laufer, entitled *Historical Jottings on Amber in Asia*. We give here an abstract of the paper.

resin into *fu ling*, so that the spirit of the *fu ling* is that of the great pine-tree. When the latter is broken or felled without the root being injured, and thus not decayed, its sap flows down and coagulates. It, therefore, cures the heart and kidneys by prevailing them with juice. Now, amber originates thus: When the branches and joints of the pine-tree are still flourishing, they are scorched, especially under the influence of the hot sun. Then the resin flows out of the trunk of the tree, and thickens in large masses on the outside, where the sun strikes it. Thereupon it sinks into the earth, and the juice, moist in the beginning, trickles into the earth for many years, where finally it is preserved only as a lustrous substance. Now, it is capable of attracting mustard; still, however, it keeps its adhesive properties. This is the reason that all sorts of insects stick to it, which happened before the time it penetrated into the ground. There are, accordingly, two substances which are produced out of the pine-tree, but which are each different in their nature. *Fu ling* arises in the female principle, and is completed in the male principle. Amber arises in the male principle and is completed in the female principle. Both, therefore, cure, regulate, and tranquilize the heart.

Some state that *fu ling* first results from the coagulation of the resin and then amber, each process requiring 1,000 years. Various kinds of amber were recognized by the Chinese. One called *hsi* amber appears to be what other ancients called agate, and what we call jet. It was by some considered a further transformation of amber, after 1,000 years, and was used as an amulet as well as for medicinal purposes, especially to prevent cataract in the eye. From the Chinese accounts it appears that this was found near Turfan, in Turkistan, and exported thence to China from about the V century to the XII, after which it dropped out.

From the testimony of occasional references to amber, it is evident that it was found in northern India at the beginning of the Christian era. Pliny alludes to Indian amber in 3 passages, one of which mentions the fact that amber in a rough state, with fine bark still adhering to it, was carried from India to Cappadocia in the time of the Emperor Tiberius. Amber was also imported into India, as appears from the writings of a Chinese, about 629 A. D., in which he mentions amber among the products of Syria met with in western India.

While amber is much used in Tibet, it does not appear to be native there. Chinese records also mention the production of amber in the Roman Empire and Persia.

Burma, however, seems to have been the chief point from which it was imported into China, by way of the province of Yunnan, though the Chinese evidently considered it the product of Yunnan itself. The *Kuang ya*, a dictionary published in 255 A. D., contains this passage:

"Amber is a pearl. Above and beside it no plants grow. The least depth [in which it occurs in the soil] amounts to 5 ft.; the greatest depth is from 8 to 9 ft. It is as big as a *hu* [a measure holding 10 pecks]. By cutting off the rind the amber is obtained. At first it is like the gum of the peach tree, but by being stiffened and hardened it assumes form. The people living in that district work it into head-pillows. It is produced in *Po nan hsien* [a part of Yunnan]."

There are few trustworthy accounts of finding amber in China proper. In fact, probably amber has been found in China only occasionally in quantities too small for commercial purposes; possibly only amber-like resins were ever found there.

There are records of tribute including amber sent to the Chinese court by Turkish tribes in the X century. Two Chinese geographies mention it as a product of Samarkand. As it is not known to exist *in situ*, in Turkistan, it very likely was brought there from the west, from Russia in all probability. Aside from the fact that amber is widely distributed in Russia, this conclusion is further borne out by the statement in a Persian work to the effect that Chinese merchandise exported into Persia included "yellow amber from the country of the Slavs. This is a resin thrown out by the sea of the Slavs."

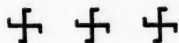
The Portuguese are known to have carried amber into China, probably from European sources. At present in Mandalay, Prussian amber is cheaper and easier to procure than the Burmese.

The Chinese manufacture various imitations of amber from copal, shellac, colophony, dyed sheep's horn, and, most important of all, glass. The upper part of the beak of a crane is also used as a substitute. A curious imitation of amber is described in a Chinese cyclopedia as follows:

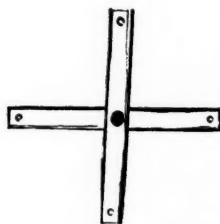
"Amber can be made from chicken-eggs by the following method: Take an egg, mix the yolk and the white of it, and boil it. As long as it is soft, an object can be cut out of it; this must be soaked in a bitter wine for several nights until it hardens; then rice-flour is added to it." This is given as a quotation from an earlier work where the word amber does not appear, so this may not have been intended for a substitute.

Many of the Chinese references to amber are in medical works, for it was considered efficacious in various complaints. Its use in making beads and other ornaments was general. It was also burned as incense.

Mr. Laufer expects to follow the present paper with another devoted to objects made from amber.



GREEK VASES AT PHILADELPHIA.—The collection of about 700 Greek and Italian vases belonging to the Pennsylvania Museum and School of Industrial Art has recently been carefully examined and rearranged. The collection is largely made up of Apulian vases, but there are examples of Cypriote, Corinthian, south Italian, and Bucchero ware as well, and also a number of Attic vases, including some black-figured amphoræ, and two white lecythi. The most valuable is an Attic red-figured *stamnos*, decorated on one side with Heracles and the Nemean lion, and on the other with Theseus and the Marathonian bull.



SIMPLEST FORM OF CROSS [FIG. 1]

THE EVOLUTION OF THE GREEK FRET

THE history of the "Greek Fret," as it is termed in the decorative work of architecture, carries with it the history of Aryan civilization.

The Greek fret is found in various forms and degrees of development wherever evidences of contact with the Aryan race appear. In fact, its history would prove such contact even though it were not established by comparative philology.

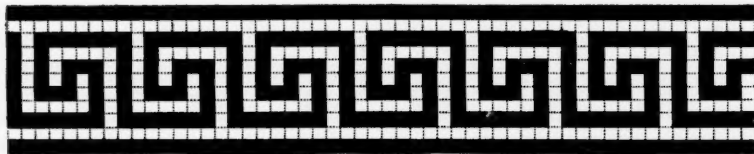
Investigation is fast destroying the so-called autochthonic races, and there is a prospect of their entire extinction, with an intimation that there were no original races outside of the stock which, according to the Mosaic account, began life in central Asia.

All so-called "autochthonic" traditions confirm in a greater or less degree the scriptural account of the origin of the human race.

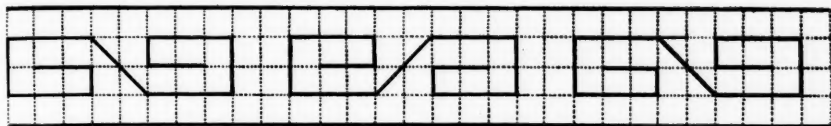
Whatever we may individually believe as to the number of "Adams," their development, or their descent, the fact seems established that there was one locality where civilization originated and from which it sent forth its waves.

This primeval society gave us the "Greek Fret."

From research in various directions and especially from study of the elementary principles which underlie composition in art, one can have no hesitation in affirming that the Greek fret was evolved from the Aryan symbol of vital flame, the "Suastika."



PERFECT FORM OF GREEK FRET [FIG. 8]



FRET FROM YUCATAN [FIG. 5]

In the space in front of the Aryan dwelling was the altar, upon which, by means of two crossed pieces of wood, perforated at their junction, a straight stick and a leather thong for rapidly revolving the stick in this central perforation, fire was produced as part of the morning worship to greet the sun, and also to bless the food of the household.

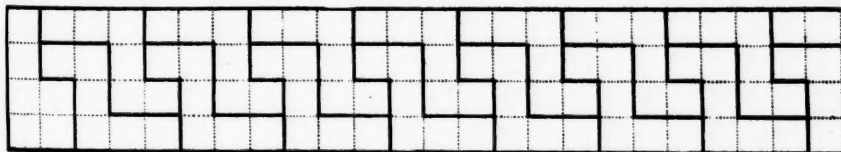
The simplest form of the cross was that of two, straight, equal lengths of wood, crossed and perforated in the center, and firmly fastened to a large flat stone, or to the level top of a tree stump.

Later, to the ends of the cross were added projections placed at right angles, presumably both to make the cross strong enough to withstand the rapid revolutions of the "pramatha" (the penetrating and revolving stick), and to elevate it above the surface of the altar; the latter for two reasons—one to permit placing combustibles beneath it, and the other to permit the deeper penetration of the pramatha.

In the improved form of the cross we have all of the elements of the Greek fret.

Naturally each piece of the cross became worn apart at the perforation, and the simplest form of the fret indicates that it was first made of these bisected members, fitted into each other in a manner readily suggested even to a child. In the fret the spaces represent the broken pieces of the cross, the dividing line of which will naturally claim attention.

The cross must have been freely used in its disconnected form. From placing many of these together, and from other apparent causes there grew the thousands of designs that are found in different localities. By the variation of the fret in the several countries one may also prove its origin.

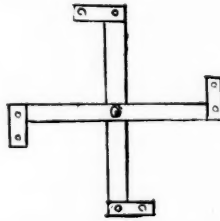


FRET FROM MEXICAN POTTERY [FIG. 6]

The Chinese show the early date of their emigration from the central home by the general use of the detached design, varied almost solely by the simplest fret.

This symbol of vital flame obtains representation in countless and complex stages and upon an endless variety of objects. What more fitting symbol to place upon that which was evidently intended to represent value, as in the case of the terre-cotta discs found at Troy? By his explorations at this place, Schliemann largely proved the truth of Homer's poems, and also proved the stage of civilization at each period of the city's growth. Added proof of its condition is, that in the older stages of Troy's existence are found detached symbols of the Divine fire, showing that the Trojans went out from civilization's home before custom had connected the symbols. In this evolving center progress was faster than elsewhere, and each wave of emigration carried the art, words, and methods of its time.

That the discs thus marked and found at Troy were not used as charms or ornaments, seems assured when we learn that such symbols were upon baked clay and not upon gold or silver. There were thou-



IMPROVED FORM OF CROSS [FIG. 2]

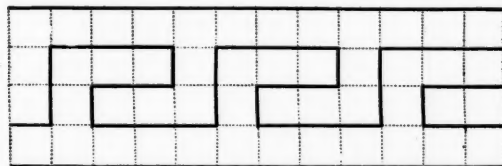
sands of gold and silver discs for personal adornment, but they bore other designs.

Doctor Schliemann's Mycenæan explorations were less rich in discoveries of the cross than his Trojan excavations, although some exquisitely perfect terra-cotta specimens were exhumed. At this place was found the cross with the added pieces extended to make a complete circle, the whole looking like a wheel with four very wide spokes with axle penetrations.

It might be as logical to believe that the circle was made first and the double diameters gradually added, as to believe that the ends of the braces were extended to form a circle if the cross were not in general use before the circle.

We have then, the cross as a very early symbol of the regenerating spark.

It is easy to conceive, also, that the combined symbol of the cross and crown, may have come from the Aryan cross and the circle, carelessly or designedly placed. The latter thought is presented as a theory, not as a conclusion.



SIMPLEST FORM OF THE FRET [FIG. 3]

Not only were the cross and the fret marked according to the stage at which they left their home, but by the peculiar characteristics of the lands to which they were carried. The Moors and Arabs softened the square corners and added obtuse and acute angles, using decorative bands rather than detached designs.

In its earliest stages, like simple words and legends of the mother land, the elementary fret probably crossed the Pacific Ocean, both by the Aleutian Islands and by those of the Southern Pacific, recording itself and its time on the pottery and on the buildings of several races in America. The stages of growth are so marked as to assure one that they were not made upon this continent, but were the results of central growth, brought here by successive waves of immigration. The use of the sign in its detached form on the crude early pottery of this continent shows its early importation, while the later, connected, continuous designs that are arranged where the shape of the vessel or building demands the artistic emphasis of horizontal lines affirm a later branching from the parent stock.

A most peculiar and significant use is made of the sign of vital fire upon pottery found in various places between New Mexico and the Isthmus of Panama. Guatamala, thus far, furnishes the finest specimens. They consist of cups and vases, and those designed to represent female figures are marked at each breast with the Aryan symbol of life.

The fret is found upon the vases, cups, and implements of the Cliff-dwellers, and in this connection it is interesting to note that there is great similarity not only between the dwellings of the inhabitants of the Himalayan mountains and the Cliff-dwellers of America, but between their decorations, especially the fret and its various developments.



ARABIAN FRET [FIG. 7]

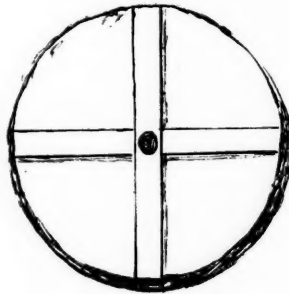
Yucatan shows the early detached forms, also the later united ones, as pure as the later Greek, while one of frequent occurrence in its ancient deserted cities shows a feature that might have developed under autochthonic influence, for here simple elements of the fret are united by sloping lines.

Mexican pottery shows an odd variety in which the eye detects the simple elements by following the spaces.

The fret from Mexico, shown in Figure 6, is also similar to one in use by the Arabians, where one detects the elements of the form by following spaces that meet from opposite borders.

But the fret in perfect Greek proportions, strange as it may appear, is found on pottery discovered at San Juan and other points in Mexico. Here the pottery is white, and the designs are done in black, of a material so lasting that the white surface is often the first to be destroyed.

Examples may be indefinitely multiplied to indicate the use and the wide diffusion of the fret, and also show how it tells of history, but



THE WHEEL [FIG. 4]

enough has been said to point the way for one who cares to carry out the thought.

Doubtless the Greeks, when they attained their higher civilization, originated mechanical devices for securing artistic proportions between the vertical and horizontal lines. The space for the ornament, whether in a band or detached elements, is divided into small squares, and the design is secured by following guide lines. In the simplest form of connected elements the outer horizontal lines are three squares long, the parallel middle line is two squares, and the vertical is either two squares or one square. (See Fig. 3.)

This simple form is very pleasing and restful to the eye. In this, also, counting from the opposite lines of the border, space repeats space.

A more complicated form, marked the climax of Greek art, in which the fret without the border is eight horizontal, by seven vertical squares.

The fret is especially adapted for use in horizontal bands, but when employed in patches loses its significance. An amusing instance of this is found in the temple at Jerusalem, where, in the ceiling of the gate of Huldah, the Jews under Roman sway, made a patchwork of decoration which included detached squares of the perfected horizontal fret, placed diagonally on the concave surface. An effort was made to connect this and other incongruous designs by Jewish vines and leaves, but the effect was a failure.

We are not disappointed because of this added proof that from the Romans came no clean, artistic impulse.

Doubtless the Greeks not only brought the fret to its highest development, but inaugurated its decadence by superfluous additions. Fortunately the best, as it is the simplest, survives.

Unmixed with other designs and in its simple and perfect form it still remains the most pleasing of all horizontal decorations, and its evolution from the symbol of the Divine spark marks the use of the Suastika as the highest symbolism for the highest decorative purposes in architecture.

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THE PALESTINE EXPLORATION FUND

THE *Quarterly* for July will show the progress of Mr. Macalister, under the new firman, and hereafter each quarter will bring its record of discovery.

The Fund is not exhibiting at the Jamestown Exposition because educational writers are not given prominence there, but it has made an exhibit in full at the International Exhibition in New Zealand, and received high praise as "an energetic society full of enthusiasm and resolve, which, working quietly and unostentatiously, is adding rich contributions to the sum of human knowledge."

While awaiting leave to resume work at Gezer, Mr. Macalister made a trip northward, and, among other matters, examined into the claims of Tel Hum and Khan Minyeh to be Capernaum. For the first time he applied the test of potsherds. At Kha Minyeh he could find none older than the Arab period and so rejected its claims. At Tel Hum, on the other hand, "the pottery shows it to have flourished at exactly the period of the glory of Capernaum." This is a superficial, but critical test.

In the *Biblical World* for June, Prof. Lewis B. Paton, lately director of the American School at Jerusalem, continues his series of valuable articles on *Jerusalem in the Earliest Times*, dealing here with

the city of David. He is strongly for the location on the hill Ophel, south of the temple site, but admits that the western hill may have been especially the residence of the Jebusites. The difficulty with the statement of Judges I, 8, that Jerusalem was captured and burned by the Israelites, he solves by attributing the verse to "one of the late editors of the Book of Judges," and by calling it "clearly unhistorical." The idea that there was a double city, denoted by the form of the name, he does not consider, but, in accounting for Absalom's dwelling two years in Jerusalem without seeing the face of David (2 Samuel, XIV, 28), he feels bound to accept the explanation that one lived in the eastern and the other in the western hill. Professor Paton believes that David saw the angel of destruction "on the western hill," and that the statement that the threshing-floor of Araunch, the Jebusite, was located on the eastern hill is due to "a desire to legitimatize the site of the temple." All this is very interesting, but not wholly conclusive, because it handles the record so roughly. The final word is not yet said.

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EDITORIAL NOTES

PANDEAN PIPE.—An interesting discovery is reported from Alise-Saint-Reine, France, on the ancient site of a fortified city of the Gauls. It is a perfect specimen of a Pandean pipe, considered as belonging to the I century.

EXCAVATIONS AT HERCULANEUM.—Reports come that the Italian Minister of Education, Signor Rava, expects to begin work at Herculaneum, in July. A fund of \$3,000 is at his disposal, with the prospect of more, according to the needs.

EXCAVATIONS AT PÆSTUM, ITALY.—Reports from Naples mention the discovery at Pæstum of a magnificent roadway, 25 ft. wide, flanked by sidewalks. The pavement is of large stone blocks, which show deep ruts. A Doric temple to Neptune has been uncovered for a distance of 120 ft.

A CHURCH OF THE V CENTURY ON THE PALATINE HILL.—Reports from Rome state that the ruins of a V century church were found during excavations on the Palatine Hill. This was originally a private chapel dedicated to St. Cesario, and used by the first Christian emperors. The popes Sergius and Eugene III were elected in this building.

DEPARTMENT OF EGYPTIAN ART IN THE METROPOLITAN MUSEUM OF ART, NEW YORK CITY.—The trustees of the New York Metropolitan Museum of Art have established a department of Egyptian art with Albert Morton Lythgoe as curator. The Museum hopes to develop its present Egyptian collection by carrying on excavations in Egypt. Mr. Lythgoe sailed for London in November to purchase equipment and to visit Cairo.

GERMAN EXPEDITION TO ABYSSINIA.—The German expedition to Abyssinia has just made its first report to the Academy of Sciences in Berlin. The members of the expedition have been working in the ancient city of Aksum. They have made a plan of the city, examined the ruins, reexamined the old inscriptions, and found some not previously known. These latter, which take the history of Abyssinia back to the IV and V century. B. C., have been copied, so that they can now be studied.

VALLETTA MUSEUM.—In the report of the Valletta Museum it is stated that among the work of the last year, various excavations were carried out which resulted in the discovery of fragments of painted pottery (1800-1500 B. C.). On the eastern limits of Zabbar pits were sunk in a circular field which looked very much like an amphitheater. Bones and teeth of elephants, etc., were found in a semi-fossilized state but well preserved.—[*Quarterly Statesment*, Palestine Exploration Fund.]

REMAINS OF A PREHISTORIC VILLAGE IN CENTRAL GERMANY.—Near Oberwaldbehrungen the remains of a prehistoric village have been found. It includes 29 funnel-shaped dwellings, which may possibly be 3,000 years old. The houses have a diameter of 26 to 32 ft., and are placed at tolerably regular intervals. By means of a trench of 10 ft. were found smoothly fitted building stones, with which the circular walls were laid for the defense against the invasion of soil and water. One large piece of sandstone lay before the fireplace, upon which ashes and charcoal were found.

WORK AT CAERWENT DURING 1906.—Mr. Ashby continued work at Caerwent during the past year, the principal work being the excavation of a large house of the courtyard type. There is evidence of rebuilding at two or more periods. The date is indicated by its encroachment on a street which had been obliterated by the amphitheater further north. Bronze objects were among the finds. One large jar carefully covered by an inverted mortarium and containing a series of three smaller vessels of red ware and two of black, and fragments of a pewter vessel was found.

EXCAVATIONS AT THEBES, GREECE.—According to reports, work at Thebes has brought to light the ruins of what is thought to be the palace of King Cadmus, the legendary founder of the city. Some pieces of sculpture, forming probably the pediment of the palace door, have been found. Colorless vases and 5 large amphoræ, intended for holding oil and wine, as well as wall pictures, some merely drawings and some in colors, were among the finds. Besides, bricks, pearl necklaces, gold, lead blocks, and other objects more than 3,000 years old are reported.

GREAT EGYPTIAN COLLECTION.—The collection of Egyptian curios which has been brought together by Mr. R. de Rustafjaell, which is to be disposed of in London, is of special interest because of the wide range, both in time and material, which it contains. It embraces objects from the earliest pre-dynastic times to the present. Among these is the praying board of Mahdi, found with the body of Khalifa after the battle of Orndurman, and it is popularly supposed to have been handed down through successive generations of chiefs from the great Mahomed.

PHONOLOGY OF THE HUPA LANGUAGE.—The University of California has recently published a pamphlet on the *Phonology of the Hupa Language*, part I, *Individual Sounds*, by Pliny Earle Goddard. Mr. Goddard's object in carrying on the studies here reported is to so record the Hupa language that it may be studied and compared with other American languages, even after it becomes extinct as a spoken language. He has employed various instruments, as well as photography to record the movements and positions of the different organs used in the various sounds of the language as spoken by a single individual.

WORK IN CYRENAICA.—M. de Mathusieulx has recently made explorations in the ancient Cyrenaica. Owing to the lack of encouragement from the Turkish government his work was restricted. He was able, however, to visit the Acropolis of Cyrene and to identify 4 ancient ports, which formerly were enriched by the trade in gold, ivory, and ostrich plumes from the Soudan—Apollonia, a marble-pillared shrine of Venus, and 40 steps descending to the amphitheater of its quays; Ptolemais, with its porphyry edifices behind the 3-mile circuit of its ramparts, and a giant aqueduct leading from mountain springs; Arsinoe, and Berenice, with its famed garden of the Hesperides.

SARDINIAN ARCHÆOLOGY.—In a paper on Sardinian archæology read before the British School at Rome, Dr. Thomas Ashby mentions menhirs and dolmens as found there, as well as in Corsica and western Europe, though absent in Italy and Sicily. The

most important prehistoric remains of Sardinia, he said, are the "nuraghi," of which there are more than 5,000 on the island. They are circular buildings, some 35 ft. or more in diameter at the base, and at least as high, constituted of large blocks of stone laid without mortar. They usually contain two chambers, one above the other, roofed by the convergence of the sides. Often bastions and towers were added. From their distribution and internal arrangements it seems evident that these were fortified habitations rather than tombs. Furthermore, tombs of two different kinds contemporary with the "nuraghi" are known to exist in Sardinia—the *sepulture dei Giganti*, similar to cromlechs, and the *Domus de Gianas*, chambers or groups of chambers cut in the rock. There are some important remains of the Roman road system on the island.

CEMETERY AT TAMISE, BELGIUM.—During the last 20 years numerous urns have been found in the northern part of Tamise, Eastern Flanders; so many, in fact, that it was supposed that the cemetery had been exhausted. But recently Louis Stroobant has reported to the Royal Museum of Brussels that work there had revealed more urns. The owner of the land, M. Dierckx, has given the government the exclusive right of excavating on his property, and the Royal Museum has undertaken systematic work. Six urns were found by them lying in ordinary soil at a depth varying from 3 to 6 ft. under a very continuous bed of sand, blackened as if by smoke, mixed with ashes and pieces of charred wood. The urns were not made by turning, and only one is ornamented. Two are provided with handles. They all contain ashes and debris of burned human bones, and one had in it pieces of the base of a vase. This cemetery is probably of a date prior to the Roman period, and seems to belong to the iron age. Near by passes the "Hooge Heirweg," the old road which led from Durme to the Ascaut. It is the same road which Van Dessel called the *diverticulum*, from Cassel to Burght.

JEWISH PAPYRI FOUND IN EGYPT.—The recent discovery of a remarkable collection of papyri at Assouan opens up an entirely new chapter in Jewish history, establishing, as it does, the fact of the existence of a Jewish colony at the southern boundary of Egypt as early as 472 B.C. This collection consists of 11 papyri and 5 pottery fragments. Sayce and Cowley, with the assistance of Spiegelberg and De Ricci, have edited the material. Under the name of Syene, Assouan is twice mentioned in the Old Testament, and there are two other possible references. The documents, of a legal nature, belonged to a colony of Jews settled at that point, and on the island of Elephantine, opposite. The papyri concern the transfer of lands, marriage settlements and divorce. They are carefully dated according to the Egyptian calendar, as well as the Hebrew, ranging from 472 to 410 B.C. The language is Aramaic, and the names used are thoroughly Hebrew in form.

The Old Testament name for God occurs both in composition and separately. This discovery leads scholars to believe that the Jewish fugitives, who carried Jeremiah into Egypt, may not have lost their identity, but may have left descendants. [Abstract from *Church Standard*.]

BULLETIN III OF THE DEPARTMENT OF ARCHÆOLOGY IN PHILLIPS ACADEMY.—*Bulletin* III of the archaeological museum of Phillips Academy, Andover, Mass., has recently been published. The curator, Mr. W. K. Moorehead, gives an account of the founding of the department, which he follows by reports of his explorations in New Mexico, the Ohio Valley, Arizona, Kentucky, and Tennessee, carried on during the past 10 years, either for the founder of the museum or for the museum itself. The report is plentifully illustrated. The department of archæology houses in its fireproof building more than 55,000 objects, most of them of American origin.

An unexplained object of great interest treasured by the museum is a sheet of birch bark, found in a hollow piece of log, 3 ft. below the surface, near Fairfield, Iowa, in 1896. On the bark are certain pictographs or unknown characters. Mr. Moorehead is convinced of the genuineness of the relic as well as of its antiquity, for the log was evidently cut with a stone tool, and there are no marks of steel tools anywhere on it. The characters are not such as belong to any known language. The figures are very crude. On the log is a covering of gum or resinous material, which does not appear to be any substance known to the white man. The dimensions of the log are 8 by 5 by 3 in. Part of the bark was blown away when the log was opened. The remainder is as thin as paper, of natural color, and well preserved. The characters appear to have been drawn in blood, and have been fading upon exposure to the light.

ROMANO-BRITISH VILLAGE.—Four miles south of Cirencester, England, is a spot commonly called a "Saxon village," but which Mr. St. Clair Baddeley, after close examination, is inclined to consider of Romano-British origin of the IV or V century A. D. Ruins of small rectangular houses are apparent upon entering the wood, where the village site is situated. The walls of a typical one stand up 4 ft. 6 in. It consists of two rooms, enclosed by walls 2 ft. 6 in. thick, and connected by a small door measuring 1 ft. 9 in. One room has dimensions of 34 ft. 8 in. by 14 ft. 2 in.; the other 33 ft. 10 in. by 14 ft. 2 in. The smaller has a door 5 ft. wide, opening toward the south. At one time this door was stopped up with stones. Undoubted Romano-British pottery was found. "The floors evidence no signs of paving. The walls are well laid on a footing of larger stones." In the larger room is a circular pit 6 ft. in diameter and 4 ft. deep with rocky bottom. This, like the walls, is constructed of dry-walling. It contained several portions of the rim of a Romano-British "olla." There

is no herring-bone work, nor Saxon pottery, nor later remains. Ollæ were found here earlier. Excavations were also carried on in another part of the wood, where two layers of burnt earth had been removed some years ago. The spade soon uncovered a platform 8 ft. 10 in. square, containing a circular pit, 5 ft. in diameter and 6 ft. 6 in. deep. In this the remains of at least 22 Romano-British pots of various sizes, most of them with well molded lips, many of them with green glaze within, and some decorated with 5-line incised-wave-pattern, were unearthed. Handles seem to be absent. Some of the pottery must have been more than a foot high, judging from the fragments. Other spots have been examined with similar results—no Saxon objects, no Samian or pseudo-Samian ware. The colors of the pottery are yellow, red, and black. The owner of the land intends to have a further examination of the site made in the near future.

WISCONSIN ARCHEOLOGIST.—The *Wisconsin Archeologist* for the months from October, 1906, to January, 1907, contains a report of the field assembly of the Wisconsin Archeological Society, held with Carroll College, at Waukesha, Wis., in May, 1906. A number of the addresses are given in full. The whole trend of the assembly seems to have been toward arousing popular interest in the preservation of the antiquities of the state. The need of education along this line was strongly emphasized, mention being made of the small amount of work done in the colleges of the state to interest the students in American archaeology, although the material is, in many cases, close at hand. The Milwaukee Museum has for years been doing a valuable work in circulating among the public schools of the city small representative collections. Each collection consists of a stone axe, celt, arrow and spearpoint, scraper and drill, and a copper point, all securely wired to the bottom of a wooden box and accompanied by an explanatory circular.

In illustrating the need of protection, Dr. W. L. Rankin mentioned finding that Lapham described and platted 13 mounds as existing on the hill of Carroll College, in 1855, while now only 6 remain entire and 1 in part. Six of those destroyed were outside the college property, so the college is not responsible. The mound partially preserved was an effigy, the tail being the portion left. Two skeletons were found in the part destroyed; one, apparently of a female, was near the center of the body, and the other, with larger bones, about at the head. These bones have been mounted.

The executive board of the Wisconsin Archeological Society has decided to buy several acres of land, upon which is situated the celebrated "man mound," located near Baraboo, Wis. "This aboriginal earthwork is without question the most interesting single effigy still existing within the bounds of our state. Its educational and other values are now such that its preservation is greatly to be desired."

"MARCHETS" IN BELGIUM.—In the province of Namur, Belgium, any considerable heap of stones is called a *marchet*. Some of these are very old and form ancient monuments, covering a burial or hiding the ashes from cremation. In some cases both are met with in the same *marchet*. Certain *marchets* were raised upon the sites of mud huts; others covered simply a fireplace or a feasting place. While the oldest of these date back to the first iron age, the presence of larger pottery, sometimes good ware made by turning, indicates that the erection of these monuments continued down to the time of the Roman dominion.

Marchets were formerly a prominent feature of the plain north-east of Pitigny. Most of them have been excavated or used for ballasting roads, but two are still important ruins. One was sacked some time ago by a road builder, who is said to have found an urn. Aside from that, only a few fragments of human bones and some pieces of coarse, poorly baked pottery, have been discovered. The other, also, appears to have been excavated prior to the work done in 1905 by the Royal Museum of Brussels. Some coarse pottery fragments and remains of charred human bones, indicating that this was a *marchet* of cremation, were all that the Museum found.

At Boussu-en-Fagne is a circular *marchet*, 10.9 yds. in diameter and 2.28 ft. high. A skull in good condition, though in fragments, was first found. Separated slightly from the skull were other bones, in such a position as to indicate that the corpse, evidently simply laid on the ground and covered with stones, was placed with his head to the west. Further search revealed a pile of debris of human bones burned upon the ground with no trace of vault or definite arrangement of stones. A little over a yard from this last was a second skeleton, placed in the same direction as the first. The skull was not as well preserved as the first, but the other bones were much more complete. Here the corpse had been placed in a rude vault, very irregular, measuring 2.08 yds. by 1.8 ft. by 7.87 in. The body appears to have been enclosed by large stones. Some stones of equally large dimensions cover the skeleton, but without implying clearly that the builders intended to form a protective covering over the remains of the deceased, for there are a number of stones of the same size scattered through the *marchet*, so the presence of some above the skeleton may be due only to chance. [Translated and condensed from the Bulletin of the Royal Museum at Brussels.]

WORK IN THE GROTTA OF SPY.—The Royal Museum of Brussels continued work in the Grotto of Spy during 1906. Three distinct bone and flint-bearing layers were excavated by means of trenches. The upper, averaging 31 to 35 in. in thickness, lies directly under a bed of vegetable mould, and is composed of yellow rubble drift, darker toward the bottom. It contains a number of flints, but very few

animal bones (*Elephas primigenius*, *Rhinoceros tichorhinus*, *Rangifer tarandus*, *Equus caballus*, *Canis lupus*, *Canis vulpes*). Some broken bones, a piece of pottery, some awls in bone and wood, and scollop shells (*Petonculus pilosus?*), each with a hole for suspension near the hinge, were found. Charcoal was scattered through the whole mass, but no fireplaces appeared.

Directly below this yellow layer, is a bed of red rubble drift, resting through part of its extent upon the rock bottom of the cave. Its thickness varies from 8 to 27 in., because of the irregularities of the rock. Fireplaces *in situ* with charcoal and remains of feasts; quantities of flints; bones belonging to the following species: *Elephas primigenius*, *Rhinoceros tichorhinus*, *Bos primigenius*, *Equus caballus*, *Ursus speloeus*, *Hyena speloea*, *Canis vulpes*; fragments of pottery; a bone awl; parts of ivory ornaments; a canine tooth of a lynx, perforated at the root so as to be suspended, and the lower part of a "staff of command" made from a reindeer antler, were among the finds at this level. The red color, characteristic of this deposit, is due to fragments of oligist and the presence of manganese.

The lowest bed revealed a fireplace, flints and bones of *Elephas primigenius*, *Rhinoceros tichorhinus*, *Bos primigenius*, *Equus caballus*, *Cervus elaphus*, and *Hyena speloea*. It will be noted that mammoth and rhinoceros bones were found at each of the 3 levels, but in the upper bed only were they associated with reindeer bones.

In the yellow bed, stone work was represented by nuclei and very abundant flakes, by flake scrapers, sharpened flakes, awls (or arrow heads?), and two very small flakes with dorsal cutting, both found in the upper part of the bed. In the red bed were found nuclei, most of them small; flakes of all sizes, flake scrapers, double scrapers, burins, and scrapers of a special type. The third level yielded no flakes, but instead retouched fragments, a little piece of amygdaloid, an awl, and a scraper of special form.

The flint of which most of the implements found at this lowest level are made was taken from an eolithic bed, situated opposite the grotto, at the place called Fond-des-Cuves. The re-worked eoliths are less numerous in the middle bed and lacking in the upper, where scarcely any except those of distant origin appear. In the beginning, then, the man of Spy used the flints which were found, so to speak, within reach of his hand, and it was only much later that, thanks to commercial relations, he could procure raw material of better quality. [Abstract from *Bulletin des Musées Royaux*, Brussels.]

EXCAVATIONS ON THE ISLAND OF DELOS DURING 1906.—M. Holleaux, director of the work on the Island of Delos for the French School at Athens, has kept more than 100 men at work during the last season removing debris from the Peribole or temple precincts, the region of the theater, the neighborhood of the club of the cult of Neptune, the Gate of the Hornes, and the Sacred Lake.

The most curious find made in the course of the excavations was a rocky esplanade, north of the sanctuary, and its 5 colossal lions carved out of Naxos marble, and placed at regular intervals. These specimens are unique in their way, and are evidently of ancient design, as the roughness and simplicity of the workmanship shows. The date may be as far back as the VII century B. C. It has been suggested that they may have formed part of a votive offering of Cræsus, king of Lydia; if so, the date is fixed at the middle of the VI century B. C.

A discovery belonging to a still earlier age, probably the XII or XV century B. C., is that of a Mycenæan tomb.

Of later date is a head supposed to be of Dionysus. The nose is mutilated, but nevertheless the expression of the face is striking. There is also a marble Polymnia, a replica of the statue by Philiskos, of Rhodes, in the II century B. C. The nobility of attitude and sobriety of workmanship in the draperies place it with the best reproductions of this type. A terra cotta head of Herakles is interesting because of the fact that the hero is represented as beardless and crowned with leaves, more graceful than virile. A large number of terra cotta braziers have been found, many of them in fragments. One, almost complete, is simple in ornamentation—fret work with a floral design around the rotundity of the upper portion. Some think that such braziers were originally used for heating houses, but eventually became mere ornaments.

Among other specimens of ceramic art, is a tragic mask, a foot-shaped vase, which copies exactly each detail of the shoe, and a lamp in the shape of a miniature boat with the head of a shark or sea dog on the prow, and a raised poop, like the tail of some fantastic fish.

A bas-relief from the imperial epoch represents a procession of divinities, Hermes, Minerva, Apollo, and Diana. A row of ox-heads at the top indicates that this was originally a part of an altar. It is a specimen of the style of art which sought to imitate the simplicity of costume and attitude of the artists of former times.

The great north door of the sanctuary on which the name of Antigone Gonatas, king of Macedonia, was found, was dug out; also a circular monument to the ancestors of certain Athenians, and several houses near the theater. One of these residences is called "Cleopatra's House," because of a statue and inscription found in it. The inscription is to the effect that Cleopatra, daughter of Adraston, an inhabitant of Myrrhinonta (a small town in Attica), erected a statue of her husband, Dioscourides, who gave two silver Delphic tripods to the temple of the Delian Apollo. The statue of Cleopatra is there, as well as that of her husband. Probably the two originally stood side by side on the pedestal bearing the inscription. The date is fixed as the II century B. C., by the name of the archon Timarchus, mentioned in the inscription. The partially freed Doric columns still give the house an imposing aspect.

